This Question Paper consists of 39 questions and 11 printed pages.

Roll No. | | | | | | | | | | | | |

Code No. 69/MAY/4

Set A

COMPUTER SCIENCE
(330)

Day and Date of Examination .....

Signature of Invigilators 1. .....

2. .....

General Instructions :

1. Candidate must write his/her Roll Number on the first page of the Question Paper.

2. Please check the Question Paper to verify that the total pages and total number of questions contained in the Question Paper are the same as those printed on the top of the first page. Also check to see that the questions are in sequential order.

3. For the objective type of questions, you have to choose any one of the four alternatives given in the question, i.e., (A), (B), (C) or (D) and indicate your correct answer in the Answer-Book given to you.

4. Making any identification mark in the Answer-Book or writing Roll Number anywhere other than the specified places will lead to disqualification of the candidate.

5. Answer for all questions, including Matching, True or False, Fill in the blanks, etc., are to be given in the Answer-Book only.

6. Write your Question Paper Code No. 69/MAY/4, Set A on the Answer-Book.

COMPUTER SCIENCE
(330)

Time : 3 Hours] [Maximum Marks : 60

Note : (i) This question paper consists of 39 questions in all.

(ii) All questions are compulsory.

(iii) Marks are given against each question.

(iv) **Section–A** consists of

(a) Q. Nos. **1** to **12**—Multiple Choice-type questions (MCQs) carrying *1* mark each. Select and write the most appropriate option out of the four options given in each of these questions.

(b) Q. Nos. **13** to **24**—carry *1* mark each and Q. Nos. **25** to **27** Objective-type questions of *2* marks each (with 2 sub-parts of *1* mark each). Attempt these questions as per the instructions given for each of the questions **13** to **27**.

(v) **Section–B** consists of

(a) Q. Nos. **28** to **35**—Very Short Answer-type questions carrying *2* marks each to be answered in the range of 30 to 50 words.

(b) Q. Nos. **36** and **37**—Short Answer-type questions carrying *3* marks each to be answered in the range of 50 to 80 words.

(c) Q. Nos. **38** and **39**—Long Answer-type questions carrying *4* marks each to be answered in the range of 80 to 120 words.

(1) Answers of all questions are to be given in the Answer-Book given to you.

(2) 15 minutes time has been allotted to read this question paper. The question paper will be distributed at 2:15 p.m. From 2:15 p.m. to 2:30 p.m., the students will read the question paper only and will not write any answer on the Answer-Book during this period.

SECTION–A

1. A tag is a special word enclosed within

(A) [ ] (B) ( )

(C) < > (D) { } 1

2. Which view allows you to organize and manage the sequence of slides? 1

(A) Slide show

(B) Notes view

(C) Slide sorter view

(D) Outline view

3. Identify the recommended image format for webpages. 1

(A) .pdf (B) .doc

(C) .ppt (D) None of these

4. The library in C++ provides support for

(A) mathematical functions

(B) character functions

(C) string functions

(D) All of the above 1

5. Which of the following is an example for structural tag in HTML? 1

(A) <html> (B) <head>

(C) <title> (D) All of these

6. Align in HTML is

(A) a tag

(B) a command

(C) an attribute

(D) None of the above 1

7. Find the output produced by the following program segment (assume all header functions are included) : 1

```
void main( )
{
int x=965;
int *y=&x;
cout <<*y;
}
```

(A) 965 (B) *965

(C) *x (D) *y

8. Size attribute is used to specify the

(A) size of the image in HTML

(B) width of the image in HTML

(C) height of the image in HTML

(D) No such attribute for the image in HTML 1

9. Which of the following is an attribute of the <BODY> tag? 1

(A) Background img (B) Bgcolour

(C) Title (D) Text

10. Which view is used to print multiple slides on a single page as thumbnails? 1

(A) Normal view

(B) Slide sorter view

(C) Handouts view

(D) Notes view

11. Which toolbar contains commands for font style and size in OpenOffice Writer? 1

(A) Formatting toolbar (B) Standard toolbar

(C) Drawing toolbar (D) Properties toolbar

12. What is the function of the docking toolbars in OpenOffice Calc? 1

(A) To create new workbooks

(B) To display the current worksheet

(C) To provide quick access to various tools and functions

(D) To save documents automatically

13. Name the protocol that is the foundation of the Internet. 1

14. Fill in the blank : 1

The octal equivalent of $(258)_{10}$ is _____.

15. What will be the output produced by the below given program if the value of the variable x is 24? 1

```
#include<iostream.h>
int main() {
    int x, y = 5;
    cin >> x;
    cout <<"Sum:"<<x + y<<endl;
    cout <<"Difference:"<<x – y<<endl;
    cout <<"Product:"<<x * y<<endl;
    cout <<"Quotient:"<<x / y<<endl;
    return 0;
}
```

16. Fill in the blank : 1

The decimal equivalent of $(BDF)_{16}$ is _____.

17. Name the tag that is used to add items in an ordered list in HTML. 1

18. What is the header file for the function log (*x*)? 1

19. What is the ASCII value of 'D'? 1

20. What is video conferencing? 1

21. Consider the below given program. What output will be produced if the value for the variable grade is entered as 'B'? 1

```
#include<iostream.h>
void main()
{
    char grade;
    cin>>grade;
    switch (grade) {
        case 'A':
            cout<<"Excellent";
        case 'B':
            cout<<"Good";
        case 'C':
            cout<<"Fair";
        default:
            cout<<"Invalid";
}
```

22. What will be the output produced by the below given code? 1

```
#include<iostream.h>
void main()
{
int i, s = 1;
    int i = 8, sum = 0;
        while (i > 0);
        {
            sum + = i;
            i = i – 2;
        }
        cout <<sum;
}
```

23. What will be the output produced by the below given code? 1

```
#include<iostream.h>

void main()
{
struct Student {
    int roll_no;
    string name;
    float marks;
    int age;
};

Student s = {101, "Gabriel", 85.5,17};
cout <<"Age:"<<s.age;
}
```

24. What is the output produced by below given program (assume all header files are included)? 1

```
#include<iostream.h>
void fun1(int); //Statement1
void main()
{
    int a = 15;
    fun1(a);
    cout <<"a = "<<a;
}
void fun1(int& b)
{
    b = b * b;
}
```

25. Fill in the blanks : 2

(a) A file is a collection of _____ related records.

(b) Files can be opened using the _____ function.

26. State whether the following statements are True or False : 2

(a) Pointers allow dynamic memory allocation in C++.

(b) Object pointers can be used to access both public and private members of an object.

27. Fill in the blanks : 2

(a) _____ refers to the position of the data with respect to the boundary of the cell.

(b) _____ means arranging data in ascending or descending order.

SECTION–B

28. What is a ring topology? 2

Or

What do you mean by hub?

29. What do you mean by char data type? 2

Or

Define RDBMS.

30. Write SQL queries for the following based on the below given BRAND table : 2

BRAND			
BRAND_ID	BRAND_NAME	STOCK	TYPE
B001	SAMSUNG	1250	DOMESTIC
B002	LG	1400	COMMERCIAL
B003	GODREJ	980	DOMESTIC
B004	SAMSUNG	882	COMMERCIAL
B005	GODREJ	1001	DOMESTIC

(a) Insert the record B006, GODREJ, 503, COMMERCIAL in table BRAND.

(b) Display the details of the DOMESTIC TYPE brands.

31. What do you mean by copying text in OpenOffice Writer? 2

32. How do <P> and <BR> tags differ in functionality? 2

33.

```
#include<iostream.h>
#include<string.h>
struct Employee {
     char name[50]
     float salary;
};
void main()
{
_____ //statement1
_____ //statement2
cout<<Emp1.name;
cout<<Emp1.salary;
}
```

Complete the above code for the following : 2

Statement 1 : Create two objects Emp11 and Emp12 of type Employee.

Statement 2 : Input the value for the member salary of the Structure Variable Emp11.

34. Write SQL queries to create the below given BRAND table : 2

BRAND		
BRAND_ID	VARCHAR(6)	PRIMARY KEY
BRAND_NAME	VARCHAR(15)	
STOCK	INT(5)	
TYPE	VARCHAR(15)	

Or

Define candidate key with an example.

35. Define the following terms (any *two*) : 2

(a) . (dot) operator

(b) Member functions

(c) Constructor

(d) Members

36. Write an HTML code to create a webpage with—

(a) a heading "Computer Science Exam" of size 6;

(b) "Today is my computer science exam, hope it will go easy and I will get good marks" to be displayed in bold;

(c) the background colour of the webpage to be in green. 3

37. Define the following terms (any *three*) : 3

(a) Relation

(b) Attribute

(c) Update command

(d) MySQL

(e) DCL

38. Answer the questions from *(a)* to *(d)* based on the below given code (assume all header files are included) : 4

```
class Employee {
    int EmpID;
    char EmpName[30];
    float Salary;
protected:
    void CalculateBonus();
public:
    Employee();
    void EnterDetails();
    void ShowDetails();
};
class Department {
    long DeptID;
    char DeptName[30];
protected:
  char Manager[30];
public:
    Department();
    void EnterDeptDetails();
    void ShowDeptDetails();
};
class Project : public Employee, private Department {
    long ProjectID;
    char ProjectName[50];
    char StartDate[10], EndDate[10];
public:
    Project();
    void StartProject();
    void ShowProjectDetails();
};
```

(a) Write the names of member functions, which are accessible from objects of class Project.

(b) Write the names of all the data members, which are used in the StartProject() function of class Project.

(c) Write the names of all the members, which are accessible from objects of class Department.

(d) Which type of inheritance is illustrated in the above C++ code?

Or

Define hierarchical inheritance. Display the structure of hierarchical inheritance by taking an example or with the help of suitable syntax.

39. Write a program to create an array of *N* elements. Using selection sort, sort the elements of the array in ascending order and print the new array. 4

Or

Write a C++ program that accepts two numbers (*X*, *Y*) from the user and passes to a function, the function will perform $\sqrt{X^2 + Y^2}$, i.e., square root of $X * X + Y * Y$ to the main program which will display the output to the user.

★ ★ ★

This Question Paper consists of 39 questions and 11 printed pages.

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Code No. 69/MAY/4

Set B

COMPUTER SCIENCE
(330)

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COMPUTER SCIENCE
(330)

Time : 3 Hours] [Maximum Marks : 60

Note : (i) This question paper consists of 39 questions in all.

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SECTION–A

1. Which view allows you to organize and manage the sequence of slides? 1

(A) Slide show

(B) Notes view

(C) Slide sorter view

(D) Outline view

2. Identify the recommended image format for webpages. 1

(A) .pdf (B) .doc

(C) .ppt (D) None of these

3. The library in C++ provides support for

(A) mathematical functions

(B) character functions

(C) string functions

(D) All of the above 1

4. Which of the following is an example for structural tag in HTML? 1

(A) <html> (B) <head>

(C) <title> (D) All of these

5. Align in HTML is

(A) a tag

(B) a command

(C) an attribute

(D) None of the above 1

6. Find the output produced by the following program segment (assume all header functions are included) : 1

```
void main( )
{
int x=965;
int *y=&x;
cout <<*y;
}
```

(A) 965 (B) *965

(C) *x (D) *y

7. Size attribute is used to specify the

(A) size of the image in HTML

(B) width of the image in HTML

(C) height of the image in HTML

(D) No such attribute for the image in HTML 1

8. Which of the following is an attribute of the <BODY> tag? 1

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(C) To provide quick access to various tools and functions

(D) To save documents automatically

12. A tag is a special word enclosed within

(A) [ ] (B) ( )

(C) < > (D) { } 1

13. Fill in the blank : 1

The octal equivalent of $(258)_{10}$ is _____.

14. What will be the output produced by the below given program if the value of the variable x is 24? 1

```
#include<iostream.h>
int main() {
    int x, y = 5;
    cin >> x;
    cout <<"Sum:"<<x + y<<endl;
    cout <<"Difference:"<<x – y<<endl;
    cout <<"Product:"<<x * y<<endl;
    cout <<"Quotient:"<<x / y<<endl;
    return 0;
}
```

15. Fill in the blank : 1

The decimal equivalent of $(BDF)_{16}$ is _____.

16. Name the tag that is used to add items in an ordered list in HTML. 1

17. What is the header file for the function log (*x*)? 1

18. What is the ASCII value of 'D'? 1

19. What is video conferencing? 1

20. Consider the below given program. What output will be produced if the value for the variable grade is entered as 'B'? 1

```
#include<iostream.h>
void main()
{
    char grade;
    cin>>grade;
    switch (grade) {
        case 'A':
            cout<<"Excellent";
        case 'B':
            cout<<"Good";
        case 'C':
            cout<<"Fair";
        default:
            cout<<"Invalid";
}
```

21. What will be the output produced by the below given code? 1

```
#include<iostream.h>
void main()
{
int i, s = 1;
    int i = 8, sum = 0;
        while (i > 0);
        {
            sum + = i;
            i = i – 2;
        }
        cout <<sum;
}
```

22. What will be the output produced by the below given code? 1

```
#include<iostream.h>

void main()
{
struct Student {
    int roll_no;
    string name;
    float marks;
    int age;
};

Student s = {101, "Gabriel", 85.5,17};
cout <<"Age:"<<s.age;
}
```

23. What is the output produced by below given program (assume all header files are included)? 1

```
#include<iostream.h>
void fun1(int); //Statement1
void main()
{
    int a = 15;
    fun1(a);
    cout <<"a = "<<a;
}
void fun1(int& b)
{
    b = b * b;
}
```

24. Name the protocol that is the foundation of the Internet. 1

25. State whether the following statements are True or False : 2

(a) Pointers allow dynamic memory allocation in C++.

(b) Object pointers can be used to access both public and private members of an object.

26. Fill in the blanks : 2

(a) _____ refers to the position of the data with respect to the boundary of the cell.

(b) _____ means arranging data in ascending or descending order.

27. Fill in the blanks : 2

(a) A file is a collection of _____ related records.

(b) Files can be opened using the _____ function.

SECTION–B

28. What do you mean by star topology? 2

Or

What do you mean by token ring?

29. What will be the result if Update command is used with where condition? 2

Or

What will be the result if Update command is used without where condition?

30. Write SQL queries for the following based on the below given BRAND table : 2

BRAND			
BRAND_ID	BRAND_NAME	STOCK	TYPE
B001	SAMSUNG	1250	DOMESTIC
B002	LG	1400	COMMERCIAL
B003	GODREJ	980	DOMESTIC
B004	SAMSUNG	882	COMMERCIAL
B005	GODREJ	1001	DOMESTIC

(a) Modify the stock of BrandID B001 to 1500.

(b) Display the details of the SAMSUNG brands.

31. What do you mean by text formatting in a document? 2

32. What will the below tag create? 2

<hr size = 5 width = 50>

33. Write SQL queries to create the below given BRAND table : 2

BRAND		
BRAND_ID	VARCHAR(6)	PRIMARY KEY
BRAND_NAME	VARCHAR(15)	
STOCK	INT(5)	
TYPE	VARCHAR(15)	

Or

Define candidate key with an example.

34. Define the following terms (any *two*) : 2

(a) . (dot) operator

(b) Member functions

(c) Constructor

(d) Members

35.
```
#include<iostream.h>
#include<string.h>
struct Employee {
     char name[50]
     float salary;
};
void main()
{
_____ //statement1
_____ //statement2
cout<<Emp1.name;
cout<<Emp1.salary;
}
```

Complete the above code for the following : 2

Statement 1 : Create two objects Emp11 and Emp12 of type Employee.

Statement 2 : Input the value for the member salary of the Structure Variable Emp11.

36. Write an HTML code to create a webpage with—

(a) a heading "DATABASE MANAGEMENT SYSTEM" of size 6;

(b) the text "MySQL is an example of DBMS" in underline;

(c) the background colour of the webpage to be in red. 3

37. Define the following terms (any *three*) : 3

(a) DDL

(b) Select command

(c) Logical data model

(d) Record

(e) Domain

38. Write a program to create an array of *N* elements. Using selection sort, sort the elements of the array in ascending order and print the new array. 4

Or

Write a C++ program that accepts two numbers (*X*, *Y*) from the user and passes to a function, the function will perform $\sqrt{X^2 + Y^2}$, i.e., square root of $X * X + Y * Y$ to the main program which will display the output to the user.

39. Answer the questions from *(a)* to *(d)* based on the below given code (assume all header files are included) : 4

```
class Employee {
    int EmpID;
    char EmpName[30];
    float Salary;
protected:
    void CalculateBonus();
public:
    Employee();
    void EnterDetails();
    void ShowDetails();
};
class Department {
    long DeptID;
    char DeptName[30];
protected:
  char Manager[30];
public:
    Department();
    void EnterDeptDetails();
    void ShowDeptDetails();
};
```

```
class Project : public Employee, private Department {
    long ProjectID;
    char ProjectName[50];
    char StartDate[10], EndDate[10];
public:
    Project();
    void StartProject();
    void ShowProjectDetails();
};
```

(a) Write the names of member functions, which are accessible from objects of class Project.

(b) Write the names of all the data members, which are used in the StartProject() function of class Project.

(c) Write the names of all the members, which are accessible from objects of class Department.

(d) Which type of inheritance is illustrated in the above C++ code?

Or

Define hierarchical inheritance. Display the structure of hierarchical inheritance by taking an example or with the help of suitable syntax.

★ ★ ★

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Code No. 69/MAY/4

Set C

COMPUTER SCIENCE
(330)

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Signature of Invigilators 1. .....

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COMPUTER SCIENCE
(330)

Time : 3 Hours] [Maximum Marks : 60

Note : (i) This question paper consists of 39 questions in all.

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SECTION–A

1. Identify the recommended image format for webpages. 1

(A) .pdf (B) .doc

(C) .ppt (D) None of these

2. The library in C++ provides support for

(A) mathematical functions

(B) character functions

(C) string functions

(D) All of the above 1

3. Which of the following is an example for structural tag in HTML? 1

(A) <html> (B) <head>

(C) <title> (D) All of these

4. Align in HTML is

(A) a tag

(B) a command

(C) an attribute

(D) None of the above 1

5. Find the output produced by the following program segment (assume all header functions are included) : 1

```
void main( )
{
int x=965;
int *y=&x;
cout <<*y;
}
```

(A) 965 (B) *965

(C) *x (D) *y

6. Size attribute is used to specify the

(A) size of the image in HTML

(B) width of the image in HTML

(C) height of the image in HTML

(D) No such attribute for the image in HTML 1

7. Which of the following is an attribute of the <BODY> tag? 1

(A) Background img (B) Bgcolour

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9. Which toolbar contains commands for font style and size in OpenOffice Writer? 1

(A) Formatting toolbar (B) Standard toolbar

(C) Drawing toolbar (D) Properties toolbar

10. What is the function of the docking toolbars in OpenOffice Calc? 1

(A) To create new workbooks

(B) To display the current worksheet

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13. What will be the output produced by the below given program if the value of the variable x is 24? 1

```
#include<iostream.h>
int main() {
    int x, y = 5;
    cin >> x;
    cout <<"Sum:"<<x + y<<endl;
    cout <<"Difference:"<<x – y<<endl;
    cout <<"Product:"<<x * y<<endl;
    cout <<"Quotient:"<<x / y<<endl;
    return 0;
}
```

14. Fill in the blank : 1

The decimal equivalent of $(BDF)_{16}$ is _____.

15. Name the tag that is used to add items in an ordered list in HTML. 1

16. What is the header file for the function log (*x*)? 1

17. What is the ASCII value of 'D'? 1

18. What is video conferencing? 1

19. Consider the below given program. What output will be produced if the value for the variable grade is entered as 'B'? 1

```
#include<iostream.h>
void main()
{
    char grade;
    cin>>grade;
    switch (grade) {
        case 'A':
            cout<<"Excellent";
        case 'B':
            cout<<"Good";
        case 'C':
            cout<<"Fair";
        default:
            cout<<"Invalid";
}
```

20. What will be the output produced by the below given code? 1

```
#include<iostream.h>
void main()
{
int i, s = 1;
    int i = 8, sum = 0;
        while (i > 0);
        {
            sum + = i;
            i = i – 2;
        }
        cout <<sum;
}
```

21. What will be the output produced by the below given code? 1

```
#include<iostream.h>
void main()
{
struct Student {
    int roll_no;
    string name;
    float marks;
    int age;
};
Student s = {101, "Gabriel", 85.5,17};
cout <<"Age:"<<s.age;
}
```

22. What is the output produced by below given program (assume all header files are included)? 1

```
#include<iostream.h>

void fun1(int); //Statement1

void main()
{
    int a = 15;
    fun1(a);
    cout <<"a = "<<a;
}
void fun1(int& b)
{
    b = b * b;
}
```

23. Name the protocol that is the foundation of the Internet. 1

24. Fill in the blank : 1

The octal equivalent of $(258)_{10}$ is _____.

25. Fill in the blanks : 2

(a) _____ refers to the position of the data with respect to the boundary of the cell.

(b) _____ means arranging data in ascending or descending order.

26. Fill in the blanks : 2

(a) A file is a collection of _____ related records.

(b) Files can be opened using the _____ function.

27. State whether the following statements are True or False : 2

(a) Pointers allow dynamic memory allocation in C++.

(b) Object pointers can be used to access both public and private members of an object.

SECTION–B

28. What do you mean by mesh topology? 2

Or

What do you mean by firewall?

29. What will be the result if Delete command is used with where condition? 2

Or

What will be the result if Delete command is used without where condition?

30. Write SQL queries for the following based on the below given BRAND table : 2

BRAND			
BRAND_ID	BRAND_NAME	STOCK	TYPE
B001	SAMSUNG	1250	DOMESTIC
B002	LG	1400	COMMERCIAL
B003	GODREJ	980	DOMESTIC
B004	SAMSUNG	882	COMMERCIAL
B005	GODREJ	1001	DOMESTIC

(a) Modify the stock of LG Brand to 1000.

(b) Display the details of the DOMESTIC TYPE brands.

31. What do you mean by Indentation and Spacing in a document? 2

32. What will the below tag create? 2

<hr size = 5 width = 50%>

33. Define the following terms (any *two*) : 2

(a) . (dot) operator

(b) Member functions

(c) Constructor

(d) Members

34.

```
#include<iostream.h>
#include<string.h>
struct Employee {
     char name[50]
     float salary;
};
void main()
{
_____ //statement1
_____ //statement2
cout<<Emp1.name;
cout<<Emp1.salary;
}
```

Complete the above code for the following : 2

Statement 1 : Create two objects Emp11 and Emp12 of type Employee.

Statement 2 : Input the value for the member salary of the Structure Variable Emp11.

35. Write SQL queries to create the below given BRAND table : 2

BRAND		
BRAND_ID	VARCHAR(6)	PRIMARY KEY
BRAND_NAME	VARCHAR(15)	
STOCK	INT(5)	
TYPE	VARCHAR(15)	

Or

Define candidate key with an example.

36. Write an HTML code to create a webpage with—

(a) a heading "PROGRAMMING LANGUAGE" of heading size 4;

(b) "C++ is an example for Programming Language" to be displayed in bold;

(c) the background colour of the webpage to be in blue. 3

37. Define the following terms (any *three*) : 3

(a) Alter Table command

(b) Alternate key

(c) Attribute

(d) Key

(e) DML

38. Answer the questions from *(a)* to *(d)* based on the below given code (assume all header files are included) : 4

```
class Employee {
    int EmpID;
    char EmpName[30];
    float Salary;
protected:
    void CalculateBonus();
public:
    Employee();
    void EnterDetails();
    void ShowDetails();
};
class Department {
    long DeptID;
    char DeptName[30];
protected:
  char Manager[30];
public:
    Department();
    void EnterDeptDetails();
    void ShowDeptDetails();
};
class Project : public Employee, private Department {
    long ProjectID;
    char ProjectName[50];
    char StartDate[10], EndDate[10];
public:
    Project();
    void StartProject();
    void ShowProjectDetails();
};
```

(a) Write the names of member functions, which are accessible from objects of class Project.

(b) Write the names of all the data members, which are used in the StartProject() function of class Project.

(c) Write the names of all the members, which are accessible from objects of class Department.

(d) Which type of inheritance is illustrated in the above C++ code?

Or

Define hierarchical inheritance. Display the structure of hierarchical inheritance by taking an example or with the help of suitable syntax.

39. Write a program to create an array of *N* elements. Using selection sort, sort the elements of the array in ascending order and print the new array. 4

Or

Write a C++ program that accepts two numbers (*X*, *Y*) from the user and passes to a function, the function will perform $\sqrt{X^2 + Y^2}$, i.e., square root of $X * X + Y * Y$ to the main program which will display the output to the user.

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